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communicating with the BIOS, 2) first and second disk drives each having data separator electronics, data formatting electronics and head positioning electronics, and 3) a striping controller connected between the first and second disk drives and the interface, the striping controller adapted to cause data being communicated between the system bus and the first and second drives to be written to and read from the first and second drives in an interleaved form and substantially in parallel. --

IN THE CLAIMS:

Please amend the claims as follows.

SUB B1

1. (Amended) A striping disk controller and disk drive system for a computer system wherein said computer system includes a CPU connected to a system bus and executes an operating system including a BIOS, said striping disk controller and disk drive system comprising:

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an interface connected to said system bus and communicating with said BIOS;

first and second disk drives each having data separator electronics, data formatting electronics and head positioning electronics;

a striping controller connected between said first and second disk drives and said interface, said striping controller adapted to cause data being communicated between said system bus and said first and second drives to be written to and read from said first and second drives in an interleaved form and substantially in parallel.

Please add the following new claims.

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5. -- (New) The method of claim 4 further including:

subdividing said data being communicated between said system bus and said first and second drives into a plurality of sequential blocks;

accessing said first drive for every other block of data; and

accessing said second drive for the remaining blocks.

6. (New) The method of claim 4 further including:

supplying a system request that includes a sector bit string, a head bit string, a track bit string and a driver bit; and

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mapping bits of said system request to a first system request data structure to be supplied to said first disk drive and a second system request data structure to be supplied to said second disk drive.

Sub B2

7. (New) A method of writing data onto two disk drives connected to system bus, said method comprising:

receiving a system request intended for a single physical drive from the system bus; and

writing to and reading from a first and a second drive in an interleaved form and substantially in parallel in response to said system request.

8. (New) A striping disk controller comprising:

an interface connectable with a system bus and communicating data via said system bus; and

control logic connected with said interface adapted to cause data being communicated via said system bus to be written to and read from a first and a second disk drive in an interleaved form and substantially in parallel.

9. (New) The controller of claim 8 further including:

control logic adapted to subdivide said data being communicated via said system bus into a plurality of sequential blocks, said control logic further adapted to access said first drive for every other block of data; and said control logic further adapted to access said second drive for the remaining blocks.

10. (New) The controller of claim 8 further including:

control logic adapted to receive a system request that includes a sector bit string, a head bit string, a track bit string and a driver bit; and

control logic adapted to map bits of said system request to a first system request data structure to be supplied to said first disk drive and a second system request data structure to be supplied to said second disk drive.

11. (New) The controller of claim 8 further including:

control logic adapted to receive a system request intended for a single physical drive from the system bus.

12. (New) An apparatus for writing data onto two disk drives connected to system bus, said apparatus comprising:

means for receiving a system request intended for a single physical drive from the system bus; and

means for writing to and reading from a first and a second drive in an interleaved form and substantially in parallel in response to said system request.

13. (New) The apparatus of claim 12 further including:

means for subdividing said data being communicated between said system bus and said first and second drives into a plurality of sequential blocks;

means for accessing said first drive for every other block of data; and

means for accessing said second drive for the remaining blocks.

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14. (New) The apparatus of claim 12 further including:

means for supplying a system request that includes a sector bit string, a head bit string, a track bit string and a driver bit; and

means for mapping bits of said system request to a first system request data structure to be supplied to said first disk drive and a second system request data structure to be supplied to said second disk drive.

Sub B3

15. (New) A striping disk controller and disk drive system for a computer system wherein said computer system includes a CPU connected to a system bus and executes an operating system including a BIOS, said striping disk controller and disk drive system comprising:

means for interfacing with said system bus and communicating with said BIOS;

first and second storage means each having data separator electronics, data formatting electronics and head positioning electronics;

a controller means connected between said first and second storage means and said means for interfacing, said controller means adapted to cause data being communicated between said system bus and said first and second storage means to be written to and read from said first and second storage means in an interleaved form and substantially in parallel. --